



July 28, 2008

Ms. Donna Inman
US EPA Region 8
8ENF-UFO
Technical Enforcement Program
1595 Wynkoop Street
Denver, Colorado 80202-1129

Re: Response to Comments
Draft Work Plan
Keller Trucking Fuel Spill
Mile 5.2, Highway 35
Polson, Montana

Dear Ms. Inman,

Environmental Partners, Inc. (EPI) is pleased to submit this Response to Comments to the Draft Work Plan for additional investigative and remedial actions at the Keller Trucking Fuel Spill at mile 5.2 of Highway 35 in Polson, Montana (site). The site is subject to an Administrative Order (Order) under Section 311(e) of the Clean Water Act (CWA) and Section 7003 of the Resource Conservation and Recovery Act (RCRA). The Order was issued by EPA Region 8 on May 22, 2008 and was received by Keller Transport on May 28, 2008.

In accordance with the Order, a Draft Work Plan dated June 26, 2008 was provided to the Environmental Protection Agency Region 8 (EPA) for review and comment. The EPA provided comments to the Draft Work Plan via electronic mail on July 17, 2008 and additional clarification and direction via electronic mail on July 23, 2008. This letter responds to EPA's comments and serves as a cover letter to the Final Work Plan.

This Response to Comments and the enclosed Final Work Plan are being provided on behalf of Keller Transport and its insurer, ACE Westchester Specialty Group (ACE). EPI is the technical lead on the project and Mr. Thomas Morin is the Project Coordinator for the Site.

While EPA's comments were not enumerated, EPI has attempted to categorize EPA's comments by general topic and to address comments in the order in which they are presented. All EPA comments are presented verbatim. For reference, EPA's original comments are presented in Attachment A to this letter.

General Comments

During prior correspondence and discussions with EPA, during the on-site meeting on July 9, 2008, during a subsequent teleconference on July 15, 2008, and in electronic correspondence on July 23, 2008 it became apparent that there are three primary areas of disagreement between EPA and EPI. These areas of disagreement center on a) the need for remedial excavation in 2008, b) the appropriateness of upgradient ground water pumping in 2008, and c) the timing and approach for upgradient ground water pumping in 2008.

The Draft Work Plan presented a task that includes the excavation of highly impacted soils at the base of the slope on the Kohler and Jones properties. The site characterization indicates that this area of soil is saturated with petroleum hydrocarbons and contains a significant quantity of the volume of fuel released during the spill. The approach presented in the Draft Work Plan was to maximize the removal of contaminant mass from the environment through direct excavation and off-site disposal. Remediating the mass of contaminant contained within these soils cannot be readily accomplished using other methods and even the applicability of other methods in these soils is questionable.

EPA appears concerned that the backfill placed within this excavation will become recontaminated and require further treatment in the future. EPI acknowledges and generally understands EPA's concern. However, we feel that the technical approach presented has taken this concern, and others, into consideration.

It is acknowledged that contaminated water will continue to migrate toward the backfill material. Current data suggest that separate-phase hydrocarbons are no longer present on the ground water in upgradient portions of the site, although dissolved-phase concentrations near saturation are still present. For these reasons we have proposed installation of a section of interceptor trench on the upgradient portion of the excavation. It must also be recognized that only a finite quantity of gasoline fuel can remain in the environment and that there cannot still be substantial source material remaining which is unaccounted (see Response to Comment No. 5 below). For those contaminants not captured by this first interceptor trench we have proposed a second trench between the excavation and the lakeshore. The backfill material will be a clean-washed pea gravel. This material has very low to no organic carbon on which hydrocarbons can sorb and the pore spaces are large and allow easy contaminant migration. It is EPI's experience that ground water in such backfill can be readily remediated without concerns of long-term dissolution of sorbed-phase hydrocarbons. If additional treatment is required, the pea gravel backfill simplifies the remediation process.

Maximizing mass removal is generally a priority during environmental remediation and it is our opinion that allowing this mass of contaminant to remain in place is more likely than not to increase the restoration timeframe and increase total project costs. These soils will likely ultimately require excavation at some point in the future, which will result in additional disruption to the landowners. While soil excavation will be highly disruptive to their properties, that major disruption will be concentrated into a single field season (i.e., 2008) as compared to multiple future field seasons.

EPI does not disagree with EPA's desire to implement ground water treatment in areas between the spill site and the homes. We feel that this is an essential step toward site remediation. The difference of opinion is in the timing and current necessity of this work. EPI has proposed beginning this work in the 2009 field season. The rationale behind this proposal was that the time and effort available in the 2008 field season is best spent on maximizing contaminant mass removal and mitigation of potential vapor pathways into the homes. As EPA's comments indicate, implementing a ground water extraction or a pumping remedy for ground water could require substantial additional study and it must be recognized that such study takes time. Moreover, removal of contaminant mass through ground water pumping or other in-situ methods results in a slower rate of mass recovery. In EPI's opinion the short-term removal of a large mass of contaminant through excavation is preferred over a longer-term removal of a lesser mass of contaminant. Given the short timeframe it does not appear feasible to attempt to implement both in the remaining current field.

EPI and Keller Transport desire to see site remediation accomplished in the most time and cost expedient manner so that claims of individual homeowners can also be resolved. It is EPI's opinion that EPA's directive does not accomplish this goal. Notwithstanding, while there is disagreement regarding the timing of excavation and ground water pumping the site is subject to the Order and Keller Transport will have to comply with EPA's directives. The attached Final Work Plan has been revised accordingly.

On July 26, 2008 EPI attended the 2008 meeting of the East Bay Homeowners Association to provide the members with an update of site activities and to answer questions. That meeting was attended by Ms. Julie Delfoglio of the Helena, Montana office of EPA. During that meeting it became apparent to EPI that the members, and in particular the owners of the affected properties, are in support of including contaminant mass excavation in the current phase of the project. The homeowners seek to have their properties restored to a usable condition as quickly as possible and do not want repeated disruptions (i.e., future excavation) of their properties. The homeowners are also concerned about the available insurance funds and seek to have as much remediation and contaminant mass removal as possible performed while those funds are available.

It is our hope that with the additional documentation presented herein and the desires of the affected properties owners, that EPA will reconsider the efficacy and the environmental benefit provided by contaminant mass removal as quickly as possible. This Final Work Plan continues to contain an optional task for mass excavation should EPA allow performance of this task.

EPA has further indicated that ground water pumping should begin immediately rather than waiting until the planned treatment system is installed and operational. EPA has also indicated that if the current temporary on-site system, which was constructed for emergency response purposes, cannot handle the added volume of water from pumping, that extracted ground water should be contained and transported off-site for treatment and disposal.

This directive represents several challenges for the project. The current treatment system is operating at capacity and cannot handle an additional large quantity of contaminated water and still meet the NPDES discharge limitations. The current system is capable of handling about 30 gallons/minute. Conservative estimates indicate that on-site wells may produce as little as 3 gallons/minute on a sustained basis. However, pumping from five wells still represents a 50 percent increase in the volume of water being sent to the system. Even a single additional well constitutes a 10 percent increase in the volume of water to be treated.

On-site treatment of an additional large volume of water would require expansion of the current system and/or construction of an additional system. A new system or system expansion would require an additional NPDES permit and would be costly to construct in an area that is already space limited. An additional system would impede the ability to complete the interceptor trench installation because of space limitations and would dilute the effort necessary to bring the long-term system on-line. Construction and permitting of an additional temporary treatment system would also take time and it could be 30 to 60 days or more before such a system could be operational. It is currently anticipated that the longer-term system could be operational within about 90 days.

Off-site transport and treatment of this water would be very expensive and represents a substantial and disproportionate cost, relative to the environmental benefit derived from this action. Current estimates indicate that the nearest off-site treatment for extracted water would be in Missoula, Montana. Off-site transport and treatment would cost about \$2/gallon. If it is assumed that only 5,000 gallons of water contaminated with 100,000 µg/L of petroleum hydrocarbons is removed from the site 5 days per week, the cost of this action would be about \$600,000 over the next 90 days. This action would remove 300,000 gallons of water, or the equivalent of about 38 gallon-equivalents of gasoline, using the assumptions above. This results in a treatment cost of about \$15,800/gallon. It is EPI's opinion that such costs far exceed the environmental benefit derived from the actions and serve to deplete the total funds ultimately available for other forms of more cost-effective remediation and site restoration.

In order to reasonably attempt to comply with EPA's directive, the Final Work Plan proposes pumping from well MW-4 at a rate of 2 to 4 gallons/minute and discharging that water via surface piping to the Arnold pond. The Arnold pond serves as a current inlet to the treatment system and this water is already contaminated and is located in an area of known contamination. If the treatment system is capable of handling this capacity additional wells such as MW-6 and MW-8 or some of the proposed wells until the volume and treatment capacity of the system are exceeded. Moreover, the Final Work Plan has been modified to include active ground water pumping from six wells and routing of that water to the proposed long-term treatment system at the site.

It is our opinion that such actions represent a reasonably practicable and cost effective method for addressing EPA's technical concerns and meeting the intent of EPA's directive. It is our hope that EPA concurs with this opinion. In order to resolve any lingering issues Keller and EPI propose a meeting with EPA in Denver during the week of August 4, 2008. It is our hope that it will be possible to finalize an expedient and cost-effective approach to protect human health and the environment and to implement remedial actions.

The remainder of this letter presents Keller and EPI's responses to EPA's specific comments, as we understand them. Several comments were unclear to us and we have responded to what we feel is the intent of the comment or concern. We welcome EPA's continued dialogue regarding these issues but also seek to reach an understanding of what EPA is requiring for the site so that we can begin certain critical tasks and continue with others.

Specific Comments

Comment No. 1 - Although sampling has taken place on site, the nature and extent of contamination can not yet be determined.

The nature and extent of contamination are well characterized and characterization work includes the installation of 10 permanent wells, 18 temporary wells, and 84 characterization borings. While data gaps do exist, and filling those data gaps was proposed, the site is sufficiently well understood to develop an appropriate remedial strategy.

If EPA specific sampling and characterization tasks not presented in the Final Work Plan, Keller and EPI would welcome specific suggestions or recommendations.

Comment No. 2 - The source of contamination has not been removed.

This statement is only partially correct. A significant mass of contaminant has been removed during the initial response. It has been estimated that approximately 1,540 gallon equivalents of gasoline fuel were removed during the initial response action near the spill site on Highway 35.

It must be remembered that the "source" of the contamination was a 6,380-gallon fuel spill. The source was finite and well known and occurred as a single short-term event. Unlike at most sites, there is not an unknown quantity of fuel that was released over an unknown duration. Knowing these typical variables removes significant uncertainty.

Some source has been removed, some fuel is present in the dissolved-phase, and a significant quantity of fuel is sorbed to a mass of soil at the base of the slope, near the shoreline of Flathead Lake. One of the primary objectives of the scope of work presented in the Draft Work Plan was to perform physical source removal.

Comment No. 3 - Free product continues to flow from the spill site down gradient beneath the homes into the lake.

This statement is not supported by the existing data or field observations. At no time has free product flowed onto the lake surface. There is not currently any observable free product on any portion of the ground water.

Comment No. 4 - The bedrock aquifer has not been adequately characterized. Pump tests, hydraulic conductivity, and information on the completion and pumping of the public water supply well need to be conducted in order to make better decisions on remedial actions.

Comment noted. EPI and Keller concur with this statement. It must be emphasized that the Draft Work Plan focuses on mitigation of indoor air impacts, mitigation of impacts to Flathead Lake, and removal of as much contaminant source material as possible within the current field season.

The investigative tasks presented in this comment by EPA, in preparation of remedial action for the residual dissolved-phase contaminants within ground water are the planned focus of the 2009 field season once all immediate impacts and threats to human health and the environment have been mitigated.

The additional data collection and investigation mentioned above are considered to be data gaps in the investigation of the site but are not considered critical to the currently planned mitigation actions.

Comment No.5 - Quantification of the amount of product spilled compared to an estimate of how much has been removed has not been attempted.

As noted above, a total of 6,380 gallons of gasoline product was spilled. This volume is well known. It has previously been estimated that about 1,540 gallon equivalents of gasoline were removed during the excavation at Highway 35 leaving about 4,840 gallons of gasoline remaining in the environment.

The Draft Work Plan identified the currently known extent of contamination at the site. This included both the dissolved-phase impacts and product sorbed to soil. An estimate of the general extent of a potential thin layer of separate-phase hydrocarbons was also included.

The volume of soils saturated with separate-phase hydrocarbons, based upon the lateral contours and thickness estimates provided in the Draft Work Plan is about 9,400 cubic feet. It has been assumed that the residual saturation of these clayey soils to gasoline-range petroleum hydrocarbons is about 20,000 milligrams/kilogram. It has also been assumed that these soils have an in-place density of about 105 pounds/cubic foot. Using these data and assumptions, the impacted soil designated for excavation in the Draft Work Plan contains about 3,050 gallon-equivalents of gasoline.

The mass of dissolved-phase gasoline present in ground water has also been estimated. Using the lateral extent of impacts estimated in the Draft Work Plan, a contaminated thickness of 15 feet, and the concentration contours presented on Figure 7, it is estimated that about 460 gallon equivalents of gasoline are present in the dissolved-phase.

It is also estimated that the treatment system captures about 1 gallon-equivalent/day of gasoline. An additional 25 gallons of gasoline were previously removed from a trench on the Jones property.

Therefore, the volume of gasoline that can generally be accounted is about 5,175 gallons with about 1,205 gallons in unknown locations. Some portion of this unknown volume of gasoline may have volatilized during the spill and subsequent emergency actions and is currently volatilizing into the soil gas. The mass transfer to the vapor-phase cannot be readily estimated.

The Draft Work Plan proposed the removal of the 3,050 gallon-equivalents of gasoline sorbed to soil. This would also have resulted in the capture of a significant quantity of high-concentration dissolved-phase during excavation dewatering and treatment. The current EPA comments indicate that this volume of gasoline shall be left in place until some undetermined future time and that ground water extraction and treatment should be undertaken.

Current field data indicate that 4-inch diameter wells constructed within the bedrock can sustain pumping rates of between 5 and 10 gallons per minute (GPM). If it is assumed that 5 wells can be pumped at 8 GPM on a sustained basis for 12 months and that the average concentration of pumped water for that 12 month period is 50,000 micrograms/Liter, those wells would be able to remove about 1,300 gallon-equivalents of gasoline. If the average concentration in a year is 10,000 micrograms/Liter the mass removed drops to 260 gallon-equivalents. Clearly, ground water remediation through extraction results in a significantly lower rate of contaminant removal from the environment than excavation and with less certainty regarding the long-term effectiveness of such removal.

Comment No. 6 - Therefore, an iterative approach as proposed is acceptable.

Given the timeline and needs of this site, an iterative approach to remediation and ongoing investigation and assessment during interim remedial actions is the most appropriate approach.

Comment No. 7 - However, as this is phase1, how many phases are expected and are sufficient funds available for the subsequent phases?

This question cannot be answered at this time. The Draft Work Plan anticipated at least one additional phase of work (i.e., active ground water treatment) and possibly a followup phase (expansion of ground water treatment). Our current understanding of EPA's comments suggests that several additional phases may be required. Under the current approach it is anticipated there will be phases for deferred excavation on Kohler and Jones and expansion of ground water treatment. The exact number of phases that will be required cannot be known until the results of current and planned phases can be evaluated.

Similarly, whether sufficient funds are available to complete all phases cannot be known at this time. Remediation work at the site is complex and expensive and a large amount of work is being, and has been, performed in a short period of time. It is in both Keller's and the individual homeowners' interests to minimize costs and maximize environmental benefit in order to provide the best use of the available funds. The Draft Work Plan proposed a methodology that focuses on contaminant mass removal (*i.e.*, excavation/mass removal) and limits study activities that are not essential to the successful performance of the remedial actions.

The current comments appear to have a focus on the need for additional study prior to implementation of certain actions. The current comments also delay the soil excavation/mass removal task an indeterminate amount of time and appear to have the effect of lengthening the restoration timeframe. Increasing the restoration timeframe can only increase the total amount of funds spent on this project.

Comment No. 8 - Remediation activities to remove free product should proceed immediately,

It is assumed that EPA is referring to free product on the water table. It should be emphasized that there is not currently any free product on the water table at the site. At the time the Draft Work Plan was prepared there was less than 1/8th inch of free product at MW-4 and that product has not been observed during recent sampling. There is no free product on ground water at the base of the slope within the area of the soil saturated with separate phase hydrocarbons. Free product is no longer entering either the Arnold or Kohler ponds and free product is no longer observed in the trench on the Jones property.

The only area of significant recoverable hydrocarbons is the area of soils saturated with sorbed separate-phase hydrocarbons on the Kohler and Jones properties. These impacts are present within the soil matrix at saturation concentrations and cannot be recovered via pumping. The only readily applicable method for removing these impacts within a reasonable timeframe is excavation and off-site disposal.

Comment No. 9 - ...start test pumping this year to prevent further contamination from migrating into the proposed area to be excavated.

We are unclear on the meaning of "*test pumping ...to prevent further contamination from migrating...*" It is assumed based upon the on-site discussions on July 15 that EPA intends that active ground water remediation through pumping will be incorporated into the interim remedial action.

The Final Work Plan has been revised to include total fluids ground water extraction from wells MW-3, MW-4, MW-6, MW-7, MW-8, and possibly the two new wells to be

installed in this area, MW-15 and MW-16. This water will be pumped at the maximum sustainable rate and piped underground to the planned remediation system for treatment.

Comment No.10 - Start sampling the lake on a monthly basis in accordance with EPA method 602.

Comment noted. The Final Work Plan has been revised accordingly.

Comment No.11 - Installation of the air mitigation systems in the houses is the first priority.

Comment noted. This task has been a priority since very near the beginning of the project and these efforts are, and have been, ongoing. The plan for the Sykes home has been finalized and the plan for the Rothwell home should be finalized as EPA reviews this letter.

Comment No. 12 - The recovery of free product from wells via dual phase extraction, soil vapor extraction or pump and treat, and through the installation of collection trenches must be the second priority in near term remediation.

As noted above, no free product is present in any wells. The response to Comment No. 9 above indicates that total fluids recovery from up to seven wells will be implemented.

Comment No. 13 - Solely excavating the soil with free product as shown on Figure 9 will not remove the primary source of the contamination that will proceed to migrate both vertically and laterally in the subsurface.

To clarify, the remedial approach proposed in the Draft Work Plan was not intended to consist "solely" of soil excavation. The area of separate-phase hydrocarbons noted on Figure 9 illustrates a volume of soil saturated with petroleum hydrocarbons. The contours in this area on Figure 9 illustrate the thickness of these impacts and therefore represent a three-dimensional volume of impact. As discussed above, this volume represents about 3,050 gallon-equivalents of gasoline or about 50 percent of the fuel that was released during the spill. As such, this volume of contamination would seem to represent the current "primary source". The petroleum hydrocarbons present within this mass of soil will continue to act as a long-term source of dissolution to the ground water and surface water. Due to the high porosity and low permeability of these clay soils it is unlikely that a remedial method other than excavation will be capable of attaining a soil cleanup level in this area.

Replacing these soils with a highly permeable backfill material (e.g., pea gravel) with a very low organic carbon content will limit the amount of sorption that will result as additional dissolved-phase impacts migrate toward the lake. The installation of an

interceptor trench on the upgradient and downgradient sides of the excavation area will maximize the capture of dissolved phase impacts and, if present, separate-phase hydrocarbons.

Comment No. 14 - The primary flowpath for the contamination appears to be through the highly fractured bedrock composed of limestone and dolomite confined locally by more recent clay/silt deposits. Page 6 states that MW-1, MW-4, MW-8, TW-10, and TW-11 all have concentrations that would indicate free product in the vicinity of these wells. In previous monitoring, MW-3 and MW-7 were also of concern. In addition, LIF (Laser Induced Fluorescence) measurements on Table 2 and on Figure 9 provided sufficient information to start free product extraction from the area of the proposed trenches and the upgradient wells.

Again, there is no observable free product in any wells on the site. When separate-phase hydrocarbons were observed at MW-4, the layer was too thin to recover as a separate phase. EPI agrees that the presence of concentrations near saturation is suggestive of separate-phase hydrocarbons but that does not change the fact that separate-phase hydrocarbons have not been observed.

To clarify, LIF indicates the presence of separate-phase hydrocarbons within the soil matrix, not separate-phase hydrocarbon on the ground water. There are no separate-phase hydrocarbons on the ground water in the area indicated by the LIF as having hydrocarbon-saturated soils.

In essence, there are currently no areas of the site with observable or recoverable quantities of separate-phase hydrocarbons on the water table. Those hydrocarbons are present either in the dissolved-phase in ground water or the sorbed-phase in soil.

Comment No. 15 - The Figure 4 cross-section and map of the flowpath (Figure 5) are misleading. The lateral extent of the flowpath of contaminated groundwater may extend much further to the west into the lake, north, south, and potentially east. A potential flowpath trend from MW-1 through MW-4 to the landscape ponds should be explored and considered in evaluating proposed remedial actions.

EPI is unclear how to address this comment. The flow path indicated on Figure 4 is illustrated as an example and indicates, based upon the preponderance of the data, the path of migration from the spill site to the areas where the highest concentrations have been observed. This flowpath is essentially along the axis of migration and is representative of particle flow. This is not intended to represent the only migration pathway.

It is acknowledged that by their presence in various locations, dissolved-phase contaminants have clearly migrated to other areas. It is our opinion that the concentration contours presented on the various figures provide an accurate representation of the currently known extent of contamination. The Draft Work Plan

acknowledges that there are some data gaps regarding our understanding of this distribution and that additional sampling points/wells are needed. Our understanding of the distribution of impacts will be refined as more data become available.

Comment No. 16 - EPA agrees with the placement of the new proposed wells as portrayed on Figure 9. EPA is requiring that at least three additional wells be placed: one between TW-7 and TW-5 downgradient of the collection trench; one up gradient between MW4 and MW8; and one up gradient between MW8 and MW6 as shown on the EPA mark-up of Figure 9.

Comment noted. The Final Work Plan has been revised accordingly.

Comment No. 17 - The geology of the area might be improved by obtaining a copy of the "Geologic Map of the East Bay 7.5' Quadrangle Northwest Montana" by Michael H Hofman and Marc S Hendrix, Montana Bureau of Mines and Geology Open File Report MBMG 496 as this is a detailed geological map of the East Bay of Flathead Lake shoreline, which EPA provided you information about on July 15, 2008 or by more in depth review of previous or additional core sampling as the new wells are constructed.

Comment noted. We have reviewed the reports and maps referenced in an effort to improve our understanding of the local geology. However, these reports are relatively general and do not provide specific information regarding bedding, strike, dip, or fracture at the site and only provide general information regarding local rock types. These maps indicate that the site is solely Quaternary (Holocene) sediments despite the obvious presence of bedrock (Helena Formation) at Highway 35 and on portions of the residential properties.

Comment No. 18 - There are concerns about the proposed excavation area and trenches as presented on pages 10-13 and Figure 9. It appears that the proposed depth of the new excavation is insufficient to reach the entire contaminated zone. Observation of free product on the water surface is useful but insufficient for making excavation decisions.

To clarify, the area of excavation is not based upon the presence of free product on the water table. The area of proposed investigation was based upon the presence of a volume of soil saturated to field capacity with petroleum hydrocarbons. The proposal is to excavate all of these hydrocarbons, which, as noted above, is the calculated equivalent of about 3,050 gallons of gasoline. The vertical and lateral extent of excavation in this area will be determined by attainment of applicable soil cleanup levels through performance and compliance sampling.

The depth to bedrock is highly variable at the site. The proposed depth of excavation is to about 5 to 6 feet below the seasonal low water table (i.e., 8 to 10 feet depending upon location) or to bedrock, whichever comes first. In some locations bedrock may be as deep as 20 feet and excavation to that depth is not practicable.

This depth of excavation will maximize the ability of the trenches to capture separate-phase hydrocarbons and dissolved-phase impacts throughout the annual cycle of water table fluctuations.

Comment No. 19 - When excavation is appropriate, the extent of the proposed excavation should be based on required risk-based soil cleanup levels and designed to fulfill a clear and measurable groundwater objective.

Comment noted. As originally stated, the goal of the remedial excavation was to achieve the appropriate cleanup levels throughout the remedial excavation. The proposed cleanup levels are subject to EPA and Confederated Tribes review and approval.

Comment No. 20 - Furthermore, before excavation of the springs in the wetlands on the Arnold, Kohler, and Jones properties, the need for coverage under the Corp of Engineers general permit 20 or general permit 38 and Tribal wetlands permit needs to be explored and the operator should apply and receive the permit coverage prior to excavating. Wetland mitigation may be required as part of these permits.

The Tribe has indicated that on Tribal lands, the Tribe determines whether site work is considered a "project". If site work is not considered a "project" then it is not subject to Tribal permitting. EPI has completed a permit application under the Tribal Aquatic Lands Conservation Ordinance (ALCO) 87(a). In an electronic correspondence the designated Tribal representative has indicated that the proposed work is not a "project" and would not be subject to further Tribal permitting. It may still be necessary to acquire a Lake County Grade and Fill permit. We are currently in contact with the Army Corp of Engineers (Mr. Alan Steinle) regarding potential additional permitting requirements on Tribal lands.

Comment No. 21 - Hydraulic conductivity tests on the materials adjacent to the trenches using the existing piezometers should be conducted.

EPI respectfully disagrees with this comment. Soils adjacent to the proposed trenches are very clayey and have very low permeability. The bulk of ground water flow is through secondary porosity (primarily fractures) within the clays. Hydraulic testing of wells within these clays will greatly underestimate the bulk hydraulic permeability if such wells do not intersect a fracture. EPI does not believe that such testing would be helpful. The purpose of the trenches is to "manifold" together these various fractures through which the bulk of ground water migration occurs. The volume of water that will be encountered by the trench cannot reliably be predicted through hydraulic testing.

Comment No. 22 - Based upon information provided in the proposed work plan, the excavation should be at least to bedrock. When installing the upper trench, it should be excavated towards TW7 to at least the midpoint of the Arnold property, see the proposed extension on the EPA mark-up of Figure 9.

Comment noted. The Final Work Plan has been revised accordingly.

Comment No. 23 - The extent of the proposed excavation, laterally and vertically (depth) for both the trenches and for the soil should be based upon field observations with numeric concentration evaluations pursuant to the sampling plan. Specific action levels for soil excavation should be established to protect human health and the environment via all pathways through soil, water, air and biota.

It is EPI's understanding from our meetings and conversation that EPA will not allow excavation at this time. This comment seems to suggest that excavation will be allowed. We respectfully request clarification on whether excavation of contaminated soils will be allowed during the currently planned phase of remediation.

Comment No. 24 - In addition to the excavation of soils and extraction and treatment of contaminated water, biological remediation of the groundwater and the potential use of a soil/vapor extraction and venting system should be explored in order to meet appropriate cleanup levels.

Comment noted. Appropriate and potentially applicable remedial technologies have been, and are being evaluated. However, in our best professional judgment and based upon our understanding of the site and the application of scientific principles, excavation of the impacted soils represented the most readily practicable alternative, is readily demonstrable and highly effective, provides the shortest remedial timeframe, in addition to being cost effective.

Comment No. 25 - The suggested water cleanup levels proposed on Table 9 of the Report do not reflect applicable groundwater standards and do not include surface water cleanup standards. All potential volatile organic compounds to be encountered must be compared to the appropriate EPA, State and/or Tribal standards. For example, the current numeric standard for benzene in surface water and groundwater established by the Confederated Salish and Kootenai Tribes (CS&KT) is 2.2 ug/L based upon human health. However, this surface and groundwater standard does not take into account risk to fish in Flathead Lake, and the consumption of fish.

EPI requests further clarification of this comment. The Final Work Plan, Table 9, has been modified to include applicable surface water cleanup standards. It is unclear to which ground water standards, or individual cleanup levels, EPA's comment is referring.

Regarding surface water criteria the standard that was referenced in developing Table 9 was the Surface Water Quality Standards and Antidegradation Policy for the CS&KT Natural Resources Department. The 2.2 µg/L standard for benzene does include both consumption of ground water and protection of organisms. The standard for protection of the organism only, and presumably consumption of that organism is 51 µg/L.

If EPA feels that other applicable ground water or surface water cleanup levels exist for all, or selected compounds, please provide us with a reference where those cleanup levels can be found.

Comment No. 26 - Table 9 must also reflect the most stringent clean-up standards for soil which are the MTDEQ Tier 1 Risk Based Levels for residential use. The MTDEQ soil standards have been adopted by the Tribe.

Comment noted. The Final Work Plan has been revised accordingly.

Comment No. 27 - The water levels also may now be inaccurate because of the rise in elevation of Flathead Lake which may influence water levels and disguise seeps into the lake.

To clarify, water levels are collected on a routine basis and are fully accurate as of the date of collection. It is acknowledged that water levels may change over time. The conditions presented in the Draft and Final Work Plans represent site conditions during a particular sampling event and period of time.

Water levels in Flathead Lake undoubtedly affect ground water levels immediately adjacent to the lake. However, water levels farther upland are not expected to be effected by such water level changes. It is also expected that the changes would only be in slope of the gradient, not in flow direction and that ground water would continue to discharge to the lake.

The site has been observed since early April when lake levels were very low and ground water levels, due to snow melt and spring rains, were very high. At that time a number of seeps were observed and captured by the treatment system. No additional seeps other than N143 and S130 were noted. No upwelling or underflow into the lake sediments and lake sure were observed. There is no reason to suspect that such ground water migration would develop now after lake levels have risen.

Comment No. 28 - Also the extent of the plume into the lake and lake sediments is mere conjecture as there has been no sampling in this area. Seep monitoring/mapping and lake sampling needs to be conducted.

EPI requests further clarification of this comment. There has been no interpretation of the "plume into the lake and lake sediments." All of the contouring and interpretation to date have been in the upland portions of the site and have been based upon standard interpolation of actual environmental data. The locations of seeps and springs have been mapped and are indicated on a number of the figures. Seeps entering the lake have been captured and sampled on a daily to near daily basis and those data have been provided to EPA and other local agencies. As of July 16, 2008 additional surface water samples have been collected at the direction of EPA and with the approval of officials of the Confederated Tribes.

It must also be remembered that at the time of the spill the lakeshore was approximately 300 feet outboard of its current location since the lake level is depressed during winter. At that time

CCE was able to readily observe seepage onto the lake sediments and the locations of seeps. The point of actual seepage was captured and routed into the treatment system and all impacted sediments were excavated. The lake level has only recently come up to its current elevation and at no time have seeps other than those currently captured or know to exist been observed.

Comment No. 29 - The work plan needs to reflect the fact that you will be sampling the lake on a monthly basis in accordance with EPA method 602. EPA, the Tribal environmental representatives, and EPI agreed to an additional lake water sample site west of the Arnold's property. All lake water samples will be collected 6 feet from the shoreline and midpoint of the water column.

Comment noted. These items were discussed on-site on July 15, 2008 and have been ongoing since that time. The Final Work Plan has been revised accordingly.

Comment No. 30 - The water supply well near the spill has not been accurately evaluated in this report. This is a noncommunity public water supply owned by the East Bay Homeowners Association. Well completion reports, pumping rates, the cone of depression, the delivery system and complete monitoring reports should be provided to EPA.

EPI requests further clarification on this comment. What is intended by a "noncommunity public water supply" and what is EPA's concern. Sampling is being performed to assess potential impacts to the water supply.

The focus of the site investigation activities was not to evaluate this well, but rather to assess the impacts resulting from the fuel spill. As a component of our ongoing site activities we will attempt to better assess the pumping rate from this well.

The well operates intermittently and fills a storage cistern and water is then pumped into two 150 gallon pressure vessels for delivery to the homes. We have provided the Montana well completion log to EPA and we have provided the results of analytical reporting for daily samples collected from this system.

The supply well is screened over a very short 5-foot interval at a depth of approximately 20 to 30 feet deeper than the water table. Ground water flow in bedrock at the site is primarily through secondary porosity such as bedding planes and fractures and, but extension, is highly localized and anisotropic. Assessing the cone of depression for the supply well would be difficult and would require several additional wells installed and screened over a similar interval as the supply well. Such wells would be of little to no benefit for environmental sampling and compliance. It is our opinion that such an effort would be expensive and time-consuming and would direct funds necessary for mitigation and remediation into an activity that provides only marginal benefit. In our opinion, the ongoing daily sampling of the water supply well, the installation of additional wells, and the periodic sampling of all of those wells will be a much better indicator of potential impacts at the supply well than a hydraulic study of the cone of

depression around the supply well.

Comment No. 31 - Table 1 depicts the depth to water in MW-2, the nearest monitoring well, to the water supply well, is significantly lower than any others indicating the potential for a cone of depression surrounding the water supply well.

Although, the water level in MW-2 is lower than other wells, the ground water contours are even and consistent at the site and indicate a consistent piezometric surface. The water level at MW-2 does not indicate a large cone of depression at the supply wells, or a ground water sink in this area.

Comment No. 32 - The daily monitoring should be continued not reduced as suggested on page 12 and Table 10. Monitoring and analysis should include benzene and other hydrocarbon contaminants as required by the Safe Drinking Water Act. EPA Method 524.2 must be used for all the drinking water VOC analysis. MW-2 and the proposed monitoring well west of the proposed treatment plant must also use EPA Method 524.2 analysis for VOC analysis.

Comment noted. The Final Work Plan has been revised accordingly.

Comment No. 33 - The possible need for a replacement water supply well and cistern must be evaluated and a possible replacement area determined, in case contaminants reach MW-2 well(indicating lateral movement towards the supply well) or direct contamination of the current supply well.

The possible need for a replacement for the supply well has been considered. We have been in very preliminary discussions with the landowners and will continue with those discussions. It should be considered that as time goes by the likelihood of impacts at the supply well decrease. If the analytical data for the supply well indicate the presence of a compound at a concentration exceeding a cleanup level the homeowners served by the well will be immediately notified and provided with bottled water. Both the Draft and Final Work Plan discuss this potential occurrence.

Comment No. 34 - The description of the treatment system and lift station must be expanded to provide more specific details regarding its construction and components. The treatment system should be sized appropriately to deal with projected volumes and concentrations of water needing to be treated.

We understand that the treatment system and all components should be appropriately sized. Given the short timeline on the project it was not possible to provide EPA with a detailed design for a treatment system. The design documents in the Final Work Plan provide additional detail but it should be understood that planning, design, and design refinement are necessarily ongoing. We will provide EPA with a final schematic, process and instrumentation diagram, and equipment specifications as soon as we have completed the design.

Comment No.35 - Also, the proposed location of the treatment system near the water supply well may not be supportive of protecting this source of drinking water, but EPA concurs with the proposed location due to the numerous wetlands in the area.

Comment noted.

Comment No. 36 - Is a carbon filter redundancy present or planned to provide adequate treatment if there is break through of the compounds?

Figure 11 presents a general schematic of the treatment system. As indicated the final treatment will be using granular activated carbon with a primary and secondary treatment vessel. Sampling will be performed before the first carbon vessel, between the carbon vessels and after the carbon vessels. The sample between the carbon vessels will be an indicator of pending breakthrough of the primary vessel. Upon breakthrough of that vessel new carbon will be ordered.

Comment No. 37 - Are there measures in place to monitor LEL levels at the lift station or inside the planned treatment building?

As noted below, the equipment within the lift station will be intrinsically safe. Any work inside the lift station will be considered a confined space entry and will be subject to an evaluation of the air environment prior to any work within the lift station. The environment within the lift station will be checked with both an explosimeter and a multigas meter to assess potential presence of hydrogen sulfide, carbon dioxide, and carbon monoxide or whether an oxygen deficient environment is present.

The enclosed treatment system building will be properly ventilated to prevent accumulation of an explosive atmosphere and the building will contain two alarms set to trigger a call to our local responders if the air inside the building reaches 10 percent of the lower explosive limit (LEL).

Comment No. 38 - Is the equipment being used intrinsically safe and explosion proof?

All equipment within potentially explosive environments will be intrinsically safe. Such environments include the lift station and the collection trenches. All other equipment will be installed in accordance with local codes and regulation and in compliance with the provisions of the Uniform Fire Code. It is anticipated that all controls and control boxes will be NEMA 4 rated. Pumps and fans from packaged systems provided by the vendors will be evaluated for appropriateness.

Comment No. 39 - What is the sampling frequency during the shake down?

It is presumed that EPA is asking what sampling frequency will be used to assess treatment

system effluent concentrations during the initial system operation.

As noted, due to the short timeframe for this project, treatment system design is ongoing. Upon completion of the design, Keller and EPI will provide EPA with a design package. That design package will include details of the treatment system as well as a sampling schedule during system startup and long-term operation. The schedule will include sampling at internal points in the system (e.g., between carbon vessels) as well as at the point of discharge.

It is typical that during startup the sampling frequency is higher as the system performance is evaluated and refined. In general, we anticipated that samples will be collected no less frequently than daily for the first week, every other day for the following three weeks, weekly the following month and the bi-weekly during long-term system operation of the stable system.

Comment No. 40 - Risk to the lake for aquatic toxicity should be evaluated prior to determining the final discharge limits for the treatment system. Based upon Tribal Water Quality Standards, the contaminated water after primary treatment may still need to be conveyed to another location for further treatment rather than be discharged to the lake.

It has been assumed that available surface water quality criteria and cleanup levels are sufficiently protective of human health and the environment. As noted above, we propose using the most restrictive cleanup levels and water quality criteria that apply to the site. We will work closely with officials of the Confederated Tribes to assure that the treatment system complies with these criteria.

It is unclear what is intended by "conveyed to another location for further treatment." There is not a publicly-owned treatment works (POTW) or other facility nearby that will be capable of handling the volume of discharge expected by the treatment system (i.e., >250 gallons/minute) and there is no way to "convey" this volume of water to another location in an economically feasible manner. On-site treatment and discharge is the only realistic method of treating impacted water that is captured before it migrates to the lake.

Comment No. 41 - Page 11, about the middle of the page, sentence begins with "EPI proposes that for permit ..." and Page 12, third bullet "Treatment System Effluent;" EPA method 8021B is not an approved method for NPDES analyses. 40 CFR 136.3, Table 1C lists approved methods for non-pesticide organics. The approved methods are EPA methods 602, 624 and 1624B and methods 6200B, 6200C, 6210B, 6220B, 6410B, and C-97. EPA method 602 is the recommended method for determining benzene, toluene, and ethylbenzene, with xylene being quantitatively determined.

However, Part 136.4 outlines procedures for a permittee to have an alternate test approved, Part 136.5 gives the approval process. Region 8 quality assurance official states that the CWA/NPDES Program is prescriptive when it comes to approved analytical methods. The Massachusetts method is not equivalent to any of those 40 CFR 136 approved methods. The Massachusetts method uses a different combination of detectors (determinative technique) than any of the 40 CFR 136 approved methods.

There are analytical methods that are approved under 40 CFR 136 that use the same or more sophisticated technology and have the same or lower detection limits than the Massachusetts method. Currently, all modifications not explicitly allowed by the approved method require prior EPA approval.

Comment noted. EPA Method 602 will be used for all surface water and system effluent analyses.

Comment No. 42 - The proposed sampling frequency and proposed analysis found on Table 11 must be revised as follows: The supply well, post pressure tank, and MW-2 are sampled daily, using EPA Method 524.2 analysis for VOC analysis. The sampling frequency for N1430 must be three time a week, the same as the system influent, since this water is now being treated by the treatment system. The lake water sites and additional monitoring well need to be added to the list for monthly sampling.

Comment noted. The Final Work Plan has been revised accordingly.

Comment No. 43 - The lake water sites need to be analyzed for the tribal surface water quality standards.

Comment noted. EPI assumes that by "analyzed" EPA actually intends that the analytical data resulting from analysis be compared to the "tribal surface water quality standards." It is our understanding that the Confederated Tribes use the water quality criteria presented in Table 9.

Comment No. 44 - The new monitoring wells must be analyzed for the same constituents as the current monitoring wells.

Comment noted. However, an earlier comment by EPA indicates that monitoring well MW-2 and new wells adjacent to the water supply well should be analyzed using EPA Method 524.2. We will assume that this earlier comment for these wells supercedes this later comment. Table 11 presents the analyses to be used at each monitoring well.

Comment No. 45 - The system influent, system effluent, N1430, S310, the four lagoon samples and the lake samples must be analyzed using EPA method 602 for determining benzene, toluene, and ethylbenzene, with xylene being quantitatively determined.

Comment noted. The Final Work Plan has been revised accordingly.

Comment No. 46 - We understand that the residents from the five homes have been temporarily relocated. We agree that this is prudent given safety concerns from construction activities as well as to minimize any inhalation and direct contact exposures from the site. No timeline was provided in this document for the anticipated date for re-occupancy of these homes.

There is not currently a timeline for this work. However, completing this work is a very high priority and we are working with all due haste to get it completed. It is necessary to negotiate

with the individual homeowners access agreements to perform this work and to include as a component of such access agreements the specific plans for the homes.

Comment No. 47 - Are there provisions for residents to return intermittently to their home for retrieval of personal items?

Residents who have been temporarily displaced may return to their homes at any time to retrieve personal items. Neither Keller Transport nor EPI has exclusive physical control of the homes. We have been granted access to perform certain tasks and some of the owners have vacated the homes, with compensation from Keller Transport, but neither Keller Transport nor EPI have any authority to preclude access to these properties. However, in order to ensure homeowner safety and security for the property, these homeowners are to provide reasonable advance notice when they are returning to the homes. To date, it appears this arrangement is acceptable.

Comment No. 48 - Given the physical and chemical hazards at the site, is there a plan to control access to the site?

As noted, neither Keller Transport nor EPI have exclusive physical control of the site. Landowners who have not been temporarily displaced remain on the site. We have been granted access to the properties to perform necessary actions but displaced landowners are allowed access to their properties. As has been arranged currently, during any proposed trenching under the approved Work Plan it will be necessary to restrict access to the work areas for health and safety reasons. Negotiating such site control will be a component of the access agreements for this work. Until the Final Work Plan has been accepted by the homeowners and access has been granted, physical control of the properties cannot be established.

Comment No. 49 - Contact the appropriate agencies to determine if the lake in this area is safe for recreational use by others.

Is EPA requesting that Keller and EPI contact the local agencies or that those agencies contact us. What criteria does EPA propose be used for determining whether an area is "safe" for recreational use or, if unsafe, how large the designated area might be?

There are no data or field observations to indicate that separate-phase hydrocarbons from the site are impacting the lake. If separate-phase hydrocarbons were to be identified on the lake surface outboard of the site and the site were the apparent source of such a release, appropriate measures would be taken to both control and remediate such a release(s) and to notify the proper authorities. As a recreational use water body with powerboating, spillage and releases of fuel hydrocarbons are a normal and daily occurrence at Flathead Lake.

Comment No. 50 - The approach taken for indoor air vapor mitigation appears to be protective of public

health. The proposal calls for installation of a subslab vacuum extraction system and a house pressurization system at each of the homes. The proposal does not explicitly mention whether mitigation such as sealing cracks and utility penetrations in basement walls and ensuring that floor drains are constructed properly. Our assumption was that these additional mitigative measures will be evaluated independently for each residence.

EPA's assumption is correct. The Draft Work Plan does (see page 17) indicate that floors will be sealed. The overarching rationale for this work is to seal potential routes of vapor entry and all penetrations through the slab will be evaluated and sealed. These will be independently evaluated for each home.

Comment No. 51 - The draft work plan does mention that actions such as removal or cleaning of carpets, drapery and other furnishings will be discussed with each individual homeowner. There is no mention of installation of subslab monitoring ports in these homes. This may be something that you may wish to consider for these homes as a way to evaluate the effectiveness of the vacuum extraction system and other residential mitigation measures.

Each homeowner is to be consulted before the installation of an individual air vapor mitigation system. But such probes have been considered and will not provide additional meaningful data and would be difficult to incorporate into the inhabited homes. The vapor mitigation systems have a sample port that allows for collecting samples of the recovered vapors. It is important to remember that the vapor mitigation systems are not a remediation system, but rather a system to protect indoor air quality. The most direct measurement of the effectiveness of these systems is collection of indoor air samples. Periodic collection of subslab vapor samples is more predictive of whether ongoing operation of the system is required and of environmental conditions beneath the homes.

Comment No. 52 - Given the construction activities, the treatment system nearby, and the venting of the subslab systems, you may also want to consider having a background ambient air sample taken upwind and off-site. It is unclear whether the four proposed background air samples will be influenced by the site or not.

It is difficult to reliably predict future wind directions and winds in the area of the site tend to be variable within a 24-hour period. We will attempt to modify the sampling locations based upon conditions at the time the canisters are placed. It is our opinion that assessing air impacts in all directions relative to the site and treatment systems will be most predictive of potential exposures.

Comment No. 53 - We agree with the use of 24-hour SUMMA canister sampling of the homes after the installation of the systems and then one week later before clearing the homes for re-occupancy (given that other site safety considerations are also addressed).

Comment noted.

Comment No. 54 - The work plan should present how these residential systems will be maintained and evaluated for effectiveness. Since this is the Phase 1 draft work plan, we assumed that this issue will be included in other phases of the plan.

At the time Draft Work Plan was prepared, there were not detailed site-specific vapor mitigation plans for each individual home. Development of such plans and negotiations with the individual landowners is ongoing. The work plan has been revised to provide available additional detail regarding the general approach. Once the systems have been installed at each of the individual homes, Keller Transport will provide EPA with an Operations and Maintenance Plan that addresses the specific systems that have been installed.

Comment No. 55 - The background information in the Quality Assurance Project Plan (QAPP) and the Health and Safety Plan both state that an emergency response team from EPA coordinated the immediate cleanup of the spill. The immediate clean-up of the spill was coordinated by the Lake County and Tribal Emergency response personnel and Keller Transports' contractor, not EPA.

The Health and Safety plan is approved with the minor revision in the background information.

Comment noted.

Comment No. 56 - The QAPP cannot be properly evaluated or approved without the Sampling and Analysis Plan, which is not included in the work plan.

EPA did not request that Keller provide a Sampling and Analysis Plan other than the sampling and analysis procedures described in detail in the Work Plan. It was our understanding that the Work Plan would serve, for this site under the current circumstances, as the Sampling and Analysis Plan. Please provide Keller with an understanding of whether EPA is requesting a formal SAP and the deadline under the Order for providing such a plan.

Ms. Donna Inman ; EPA Region 8
Response to Comments,
Draft Work Plan
Keller Transport Fuel Spill
Polson, Montana
July 28, 2008

We understand that there is some disagreement on specific issues between Keller and EPA. In stating our technical points and positions we have sought to be clear while respectfully stating our position. If after reviewing this letter you have any questions or need additional information, please feel free to call me at (425) 395-0030. We look forward to your response.

Sincerely,

A handwritten signature in black ink that reads "Thomas C. Morin". The signature is written in a cursive, flowing style.

Thomas C. Morin, L.G.
President and Principal Geologist

Attachment A – EPA Comments to Draft Work Plan

cc: Mr. Mark Yavinsky; ACE Westchester Specialty Group
Mr. Charles Hansberry; Counsel for Keller Transport
Mr. Thomas Jones; Counsel for ACE Westchester
Mr. Ron Kohler; President, East Bay Homeowners Association
Mr. Mike Durglo; Confederate Tribes
Mr. Steve Stanley; Lake County, Office of Emergency Management

Attachment A

EPA Comments on the June 26, 2008 Draft Work Plan for the Keller Trucking Fuel Spill

Although sampling has taken place on site, the nature and extent of contamination can not yet be determined. The source of contamination has not been removed. Free product continues to flow from the spill site down gradient beneath the homes into the lake. The bedrock aquifer has not been adequately characterized. Pump tests, hydraulic conductivity, and information on the completion and pumping of the public water supply well need to be conducted in order to make better decisions on remedial actions. Quantification of the amount of product spilled compared to an estimate of how much has been removed has not been attempted. Therefore, an iterative approach as proposed is acceptable. However, as this is phase 1, how many phases are expected and are sufficient funds available for the subsequent phases? Remediation activities to remove free product should proceed immediately, start test pumping this year to prevent further contamination from migrating into the proposed area to be excavated. Start sampling the lake on a monthly basis in accordance with EPA method 602.

Installation of the air mitigation systems in the houses is the first priority. The recovery of free product from wells via dual phase extraction, soil vapor extraction or pump and treat, and through the installation of collection trenches must be the second priority in near term remediation. Solely excavating the soil with free product as shown on Figure 9 will not remove the primary source of the contamination that will proceed to migrate both vertically and laterally in the subsurface. The primary flowpath for the contamination appears to be through the highly fractured bedrock composed of limestone and dolomite confined locally by more recent clay/silt deposits. Page 6 states that MW-1, MW-4, MW-8, TW-10, and TW-11 all have concentrations that would indicate free product in the vicinity of these wells. In previous monitoring, MW-3 and MW-7 were also of concern. In addition, LIF (Laser Induced Fluorescence) measurements on Table 2 and on Figure 9 provided sufficient information to start free product extraction from the area of the proposed trenches and the upgradient wells. The Figure 4 cross-section and map of the flowpath (Figure 5) are misleading. The lateral extent of the flowpath of contaminated groundwater may extend much further to the west into the lake, north, south, and potentially east. A potential flowpath trend from MW-1 through MW-4 to the landscape ponds should be explored and considered in evaluating proposed remedial actions. EPA agrees with the placement of the new proposed wells as portrayed on Figure 9. EPA is requiring that at least three additional wells be placed: one between TW-7 and TW-5 downgradient of the collection trench; one up gradient between MW4 and MW8; and one up gradient between MW8 and MW6 as shown on the EPA mark-up of Figure 9. The geology of the area might be improved by obtaining a copy of the "Geologic Map of the East Bay 7.5' Quadrangle Northwest Montana" by Michael H Hofman and Marc S Hendrix, Montana Bureau of Mines and Geology Open File Report MBMG 496 as this is a detailed geological map of the East Bay of Flathead Lake shoreline, which EPA provided you information about on July 15, 2008 or by more in depth review of previous or additional core sampling as the new wells are constructed.

There are concerns about the proposed excavation area and trenches as presented on pages 10-13 and Figure 9. It appears that the proposed depth of the new excavation is insufficient to reach the entire contaminated zone. Observation of free product on the water surface is useful but insufficient for making excavation decisions. When excavation is appropriate, the extent of the proposed excavation should be based on required risk-based soil cleanup levels and designed to fulfill a clear and measurable groundwater objective. Furthermore, before excavation of the springs in the

wetlands on the Arnold, Kohler, and Jones properties, the need for coverage under the Corp of Engineers general permit 20 or general permit 38 and Tribal wetlands permit needs to be explored and the operator should apply and receive the permit coverage prior to excavating. Wetland mitigation may be required as part of these permits. Hydraulic conductivity tests on the materials adjacent to the trenches using the existing piezometers should be conducted. Based upon information provided in the proposed work plan, the excavation should be at least to bedrock. When installing the upper trench, it should be excavated towards TW7 to at least the midpoint of the Arnold property, see the proposed extension on the EPA mark-up of Figure 9. The extent of the proposed excavation, laterally and vertically (depth) for both the trenches and for the soil should be based upon field observations with numeric concentration evaluations pursuant to the sampling plan. Specific action levels for soil excavation should be established to protect human health and the environment via all pathways through soil, water, air and biota. In addition to the excavation of soils and extraction and treatment of contaminated water, biological remediation of the groundwater and the potential use of a soil/vapor extraction and venting system should be explored in order to meet appropriate cleanup levels.

The suggested water cleanup levels proposed on Table 9 of the Report do not reflect applicable groundwater standards and do not include surface water cleanup standards. All potential volatile organic compounds to be encountered must be compared to the appropriate EPA, State and/or Tribal standards. For example, the current numeric standard for benzene in surface water and groundwater established by the Confederated Salish and Kootenai Tribes (CS&KT) is 2.2 ug/L based upon human health. However, this surface and groundwater standard does not take into account risk to fish in Flathead Lake, and the consumption of fish. Table 9 must also reflect the most stringent clean-up standards for soil which are the MTDEQ Tier 1 Risk Based Levels for residential use. The MTDEQ soil standards have been adopted by the Tribe.

The water levels also may now be inaccurate because of the rise in elevation of Flathead Lake which may influence water levels and disguise seeps into the lake. Also the extent of the plume into the lake and lake sediments is mere conjecture as there has been no sampling in this area. Seep monitoring/mapping and lake sampling needs to be conducted. The work plan needs to reflect the fact that you will be sampling the lake on a monthly basis in accordance with EPA method 602. EPA, the Tribal environmental representatives, and EPI agreed to an additional lake water sample site west of the Arnold's property. All lake water samples will be collected 6 feet from the shoreline and midpoint of the water column.

The water supply well near the spill has not been accurately evaluated in this report. This is a noncommunity public water supply owned by the East Bay Homeowners Association. Well completion reports, pumping rates, the cone of depression, the delivery system and complete monitoring reports should be provided to EPA. Table 1 depicts the depth to water in MW-2, the nearest monitoring well, to the water supply well, is significantly lower than any others indicating the potential for a cone of depression surrounding the water supply well. The daily monitoring should be continued not reduced as suggested on page 12 and Table 10. Monitoring and analysis should include benzene and other hydrocarbon contaminants as required by the Safe Drinking Water Act. EPA Method 524.2 must be used for all the drinking water VOC analysis. MW-2 and the proposed monitoring well west of the proposed treatment plant must also use EPA Method 524.2 analysis for VOC analysis. The possible need for a replacement water supply well and cistern must

be evaluated and a possible replacement area determined, in case contaminants reach MW-2 well(indicating lateral movement towards the supply well) or direct contamination of the current supply well.

The description of the treatment system and lift station must be expanded to provide more specific details regarding its construction and components. The treatment system should be sized appropriately to deal with projected volumes and concentrations of water needing to be treated. Also, the proposed location of the treatment system near the water supply well may not be supportive of protecting this source of drinking water, but EPA concurs with the proposed location due to the numerous wetlands in the area. Is a carbon filter redundancy present or planned to provide adequate treatment if there is break through of the compounds? Are there measures in place to monitor LEL levels at the lift station or inside the planned treatment building? Is the equipment being used intrinsically safe and explosion proof? What is the sampling frequency during the shake down? Risk to the lake for aquatic toxicity should be evaluated prior to determining the final discharge limits for the treatment system. Based upon Tribal Water Quality Standards, the contaminated water after primary treatment may still need to be conveyed to another location for further treatment rather than be discharged to the lake.

Page 11, about the middle of the page, sentence begins with "EPI proposes that for permit ..." and Page 12, third bullet "Treatment System Effluent;" EPA method 8021B is not an approved method for NPDES analyses. 40 CFR 136.3, Table 1C lists approved methods for non-pesticide organics. The approved methods are EPA methods 602, 624 and 1624B and methods 6200B, 6200C, 6210B, 6220B, 6410B, and C-97. EPA method 602 is the recommended method for determining benzene, toluene, and ethylbenzene, with xylene being quantitatively determined.

However, Part 136.4 outlines procedures for a permittee to have an alternate test approved, Part 136.5 gives the approval process. Region 8 quality assurance official states that the CWA/NPDES Program is prescriptive when it comes to approved analytical methods. The Massachusetts method is not equivalent to any of those 40 CFR 136 approved methods. The Massachusetts method uses a different combination of detectors (determinative technique) than any of the 40 CFR 136 approved methods. There are analytical methods that are approved under 40 CFR 136 that use the same or more sophisticated technology and have the same or lower detection limits than the Massachusetts method. Currently, all modifications not explicitly allowed by the approved method require prior EPA approval.

The proposed sampling frequency and proposed analysis found on Table 11 must be revised as follows: The supply well, post pressure tank, and MW-2 are sampled daily, using EPA Method 524.2 analysis for VOC analysis. The sampling frequency for N1430 must be three time a week, the same as the system influent, since this water is now being treated by the treatment system. The lake water sites and additional monitoring well need to be added to the list for monthly sampling. The lake water sites need to be analyzed for the tribal surface water quality standards. The new monitoring wells must be analyzed for the same constituents as the current monitoring wells. The system influent, system effluent, N1430, S310, the four lagoon samples and the lake samples must be analyzed using EPA method 602 for determining benzene, toluene, and ethylbenzene, with xylene being quantitatively determined.

We understand that the residents from the five homes have been temporarily relocated. We agree that this is prudent given safety concerns from construction activities as well as to minimize any inhalation and direct contact exposures from the site. No timeline was provided in this document for the anticipated date for re-occupancy of these homes. Are there provisions for residents to return intermittently to their home for retrieval of personal items? Given the physical and chemical hazards at the site, is there a plan to control access to the site? Contact the appropriate agencies to determine if the lake in this area is safe for recreational use by others.

The approach taken for indoor air vapor mitigation appears to be protective of public health. The proposal calls for installation of a subslab vacuum extraction system and a house pressurization system at each of the homes. The proposal does not explicitly mention whether mitigation such as sealing cracks and utility penetrations in basement walls and ensuring that floor drains are constructed properly. Our assumption was that these additional mitigative measures will be evaluated independently for each residence. The draft work plan does mention that actions such as removal or cleaning of carpets, drapery and other furnishings will be discussed with each individual homeowner.

There is no mention of installation of subslab monitoring ports in these homes. This may be something that you may wish to consider for these homes as a way to evaluate the effectiveness of the vacuum extraction system and other residential mitigation measures.

Given the construction activities, the treatment system nearby, and the venting of the subslab systems, you may also want to consider having a background ambient air sample taken upwind and off-site. It is unclear whether the four proposed background air samples will be influenced by the site or not.

We agree with the use of 24-hour SUMMA canister sampling of the homes after the installation of the systems and then one week later before clearing the homes for re-occupancy (given that other site safety considerations are also addressed).

The work plan should present how these residential systems will be maintained and evaluated for effectiveness. Since this is the Phase 1 draft work plan, we assumed that this issue will be included in other phases of the plan.

The background information in the Quality Assurance Project Plan (QAPP) and the Health and Safety Plan both state that an emergency response team from EPA coordinated the immediate clean-up of the spill. The immediate clean-up of the spill was coordinated by the Lake County and Tribal Emergency response personnel and Keller Transports' contractor, not EPA. The Health and Safety plan is approved with the minor revision in the background information. The QAPP cannot be properly evaluated or approved without the Sampling and Analysis Plan, which is not included in the work plan.

From: Inman.Donnak@epamail.epa.gov
Subject: **Re: Request for Clarification on Comments**
Date: July 23, 2008 12:58:34 PM PDT
To: "Thomas C. Morin, L.G." <thomm@epi-wa.com>
Cc: "Charles E. Hansberry" <cehansberry@GARLINGTON.COM>, Eric Koltres <erick@epi-wa.com>, Jim Rolle <jrolle@wcec.com>, lakeoem@lakemt.gov, "Laura J. Hawes" <lhawes@cozen.com>, Mike Durglo <miked@cskt.org>

Please see EPA responses in Blue.

"Thomas C.
Morin, L.G."
<thomm@epi-wa.co
m> To
Donnak Inman/ENF/R8/USEPA/US@EPA
cc
07/21/2008 11:14 "Laura J. Hawes"
AM <lhawes@cozen.com>, "Charles E.
Hansberry"
<cehansberry@GARLINGTON.COM>, Jim
Rolle <jrolle@wcec.com>, Eric
Koltres <erick@epi-wa.com>, Mike
Durglo <miked@cskt.org>,
lakeoem@lakemt.gov
Subject
Request for Clarification on
Comments

Donna,

We are working on responding to EPA's comments but I need some clarification and assistance in understanding some of what has been provided.

During our on-site meeting and in the prior email, EPA indicated that it would not allow excavation work in the back yards at this time. Our July 15 teleconference also indicated that EPA would not allow excavation. However, the comments provided by EPA are not clear on this point.

Will EPA allow excavation of the area of fuel saturated soils on the Kohler and Jones properties?

No, at this time EPA will not allow Keller Transport to excavate the Arnold, Kohler, or Jones properties other than for the limited purpose of installing the groundwater trench collection system. EPA wants contaminated groundwater extraction and treatment to occur from the onsite wells, prior to any mass excavation of soils. Please, verify whether you need to have coverage under the Corps of Engineers general permit 20 or 38 and the Tribal wetlands program, before you start digging to install the groundwater trench collection system.

During our site meeting and again in the conference call EPA indicated

that it wants ground water extraction and treatment from a number of on-site wells. The comments provided do not provide an explicit statement of requiring treatment or from which wells EPA would like to see ground water extraction. EPA does state that free product removal should begin immediately and that "The recovery of free product from wells via dual phase extraction, soil vapor extraction or pump and treat, and through the installation of collection trenches must be the second priority in near term remediation". However, there is not any free-phase hydrocarbon on ground water to remove at this time so it is not clear how we should comply with this directive.

Does EPA seek ground water pumping and treatment from wells as a component of trench installation and ground water recovery/treatment? From which wells does EPA require such pumping and treatment?

In accordance with our June 17, 2008 comments on the proposed Work Plan, EPA wants the test pumping of the free product or BETX saturated water from the wells that you determine to be the best candidates for contaminant recovery to start immediately. If you wish to incorporate the wells into the trench system, EPA does not object.

We need to be clear that such pumping and treatment cannot be performed until the long-term system has been installed and is operational. The current system is at capacity and cannot be readily upgraded.

If the current treatment system cannot handle the additional water or contaminant load, then the contaminated water will need to be contained and hauled away for proper treatment or disposal.

We may have other questions or we may need clarification on other issues, and those questions and requests for clarification will be presented in our response to comments. However, these two questions above are on the critical path to providing EPA with a Final Work Plan that can be implemented in the near future. Clarification on non-critical path issues can be deferred and may be subject to ongoing discussions between Keller and EPA, but our primary interest in the near term is developing a scope of work on for an interim remedial action with which EPA can agree.

We look forward to you reply.

Thom Morin

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